



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/590,428

08/23/2006

Estill Thone Hall JR.

PU040027

7022

24498

7590

10/16/2008

Joseph J. Laks

Thomson Licensing LLC

2 Independence Way, Patent Operations

PO Box 5312

PRINCETON, NJ 08543

EXAMINER

HOWARD, RYAN D

ART UNIT

PAPER NUMBER

2851

MAIL DATE

DELIVERY MODE

10/16/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/590,428	Applicant(s) HALL ET AL.	
	Examiner RYAN HOWARD	Art Unit 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/23/2006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3-8, and 11-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Sharp et al. (US Patent 7,083,282 B1).

Regarding claim 1, Sharp teaches a lamp providing randomly polarized light (202, figure 3); an integrator for directing light from the lamp along an axis of the integrator (212, figure 3); and a wire-grid polarizer disposed at a first end of the integrator (214, figure 3).

Regarding claim 3, Sharp further teaches the wire-grid polarizer is disposed at a light output end of the integrator (214, figure 3).

Regarding claim 4, Sharp further teaches the lamp is a mercury arc lamp with an elliptical or a parabolic reflector (202, figure 3; column 2 lines 64-65).

Regarding claim 5, Sharp further teaches the second end of the integrator is free of any polarization means (column 3 lines 4-5).

Regarding claim 6, Sharp teaches a lamp providing randomly polarized light (202, figure 3); an integrator for directing light from the lamp along an axis of the integrator (212, figure 3); a wire-grid polarizer disposed at a first end of the integrator (214, figure 3); and a liquid crystal on silicon (LCOS) imager for modulating the polarized light from the integrator on a pixel-by-pixel basis responsive to a video signal to form a video image (228, figure 3).

Regarding claim 7, Sharp further teaches a clean up polarization means disposed between the wire-grid polarizer and the LCOS imager (224, figure 3).

Regarding claim 8, Sharp further teaches the clean-up polarization means is a polarizing beam splitter (column 3 lines 51-53).

Regarding claim 9, Sharp further teaches the clean-up polarization means is a linear polarizer (226, 304; figure 3). At least one of these quarter-wave plates has to be converting light into a linear polarization state.

Regarding claim 11, Sharp further teaches the wire-grid polarizer is disposed at the light output end of the integrator (214, figure 3).

Regarding claim 12, Sharp further teaches the wire-grid polarizer is about the size of the output end of the integrator (214, figure 3).

Regarding claim 13, Sharp further teaches the lamp is a mercury-arc lamp with an elliptical or a parabolic reflector (202, figure 3).

Regarding claim 14, Sharp further teaches the second end of the integrator is free of any polarization means (column 3 lines 4-5).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharp et al. (US Patent 7,083,282 B1) in view of O'Conner et al. (US Patent 6,811,272 B2).

Regarding claims 2 and 10, Sharp does not teach the wire-grid polarizer is disposed at a light input end of the integrator. O'Conner teaches a wire-grid polarizer disposed at the light input end of the integrator (18, figure 2). O'Conner teaches a polarization recycling system more specifically wherein the wire-grid polarizer is disposed after the light source to provide a light lamp that outputs only one polarization direction while recycling and converting light produced in other polarization states. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to replace the projector lamp of Sharp with the polarization conversion system of O'Conner because the polarization system of O'Conner increases the output intensity (column 1 lines 15-24).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Makas (US Patent 3,566,099) teaches a light source with a polarization recycling/conversion system. Kato (US Patent 6,698,891 B2) teaches an illumination system providing a single polarization. Liao (US 2005/0041228 A1) teaches a polarization conversion system disposed between the light source and the light tunnel.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RYAN HOWARD whose telephone number is (571)270-5358. The examiner can normally be reached on Monday-Friday 7:30-5:00, First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diane Lee can be reached on (571)272-2399. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2851

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William C. Dowling/
Primary Examiner, Art Unit 2851

/Ryan Howard/
Examiner, Art Unit 2851
10/06/2008